

USSN: 10/747,873
Group Art Unit: 2876
Docket No. 161-P-071BUS01

REMARKS

Claims 1 – 24 are pending in this application.

No claims have been allowed.

Amendments to the Specification

The specification has been amended to clarify the description of the invention.

The time length of the cycles has been and is referred to “period” with such term appearing as the most appropriate to indicate the time length of a succession of operations that is repeated periodically over time.

The time length of a portion of a cycle, more in general of anything not being a cycle, has also been referred to “period”. To avoid possible confusion, the term “period” when used in this sense (and not as described in the preceding paragraph) has been replaced by the term “duration”. The teaching in the description has not been changed and no new matter has been added. The term has merely been changed in order to avoid the possibility of confusing the term “period” when used for two different purposes in the description.

Further, the term “cycle-portion” has been used in the claims for both the illumination and the non-illumination part of an illumination cycle. However, the term “step” has been used in the specification. For clarity and consistency with the claims, the term “step”, when used for this purpose, has been replaced with the term “cycle-portion”. Support for the use of the term “cycle-portion” is replete in the claims. No new matter has been added.

Amendments to the Claims

In order to define claim 1 more precisely, claim 1 has been amended to:

- (a) state the conversion cycle comprises an acquisition step and a non-acquisition step; and

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- (b) add the feature that the acquisition step overlaps at least partially with the illumination cycle-portion of the light sources of each of the groups of light sources.

Feature for (a) derives directly from claim 3 as originally filed.

Support for feature (b) can be easily recognized in each of the embodiments of the invention as illustrated in Figures 4 – 5 and 7 – 9 and in the description of paragraphs [0041] and [0045] where it is explicitly stated that the light emitted by the light sources of each group at an illumination cycle-portion is either partly or wholly used, which clearly means that it never happens that this emitted light is not used, i.e., the illumination cycle-portion of each of the groups of light sources overlaps at least partially with the acquisition step. No new matter has been added.

Claim 3 has been merely been rewritten in independent form.

The dependency of claim 4 has been revised to claim 1.

A typographical error has been corrected in claim 10.

Claims 14 – 24 have been added.

Claim 14 addresses the at least partial overlap of the non-acquisition step with the illumination cycle-portion of the light sources of at least one of the groups of light sources. Similar to claim 1, support for this feature can be easily recognized in each of the embodiments of the invention as illustrated in Figures 4 – 5 and 7 – 9 and in the description of paragraphs [0041] and [0045] where it is explicitly stated that the light emitted by the light sources of each group at an illumination cycle-portion is only partly used. No new matter has been added.

Claims 15 – 23 are newly with independent claim 15 being similar to claim 1 with the exception that instead of having the feature (b) referred to above with respect to claim 1, claim 15 rather incorporates the feature of claim 14 discussed above. Dependent claims correspond to claims 2, 4, 5, 6, 7, 8, 10 and 13. Again, no new matter has added.

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New claim 24 is essentially original claim 13 rewritten in independent form. No new matter has been added.

Claim Objections

Claim 1 has been objected to due to two informalities in language. Accordingly, claim 1 has been amended incorporating the language suggested by the Examiner.

With the amendment of claim 1 adopting the language suggested by the Examiner, the objection to claim 1 should be cured.

Rejections Under 35 USC § 103

Claims 1, 2 and 9 – 12 have been rejected under 35 USC § 103 as being unpatentable over U.S. Patent No. 6,501,087, Koretsune et al. These rejections are respectfully traversed.

Koretsune et al relates to an image reading apparatus that includes light sources having multiple wavelength to illuminate an object (a banknote) to be read and a photodetector receiving both transmitted light and reflected light coming from the object.

It is respectfully submitted that Koretsune et al isn't particularly pertinent, for two main reasons. First, Koretsune et al addresses a problem (sensitivity of photodetection variable according to the wavelength of the light source) that is quite different from the problem of the present application (unevenness of illumination on the area to be read). Second, in contrast to the assertion of the Examiner (on page 3, line 4 of the Office Action), the light collected and detected by the photodetector of Koretsune et al is NOT a diffused light but rather either a reflected or a transmitted one. See, in particular, paragraph between columns 4 and 5 of Koretsune et al.

Thus, it is respectfully submitted that claims 1, 2 and 9 – 12 as originally submitted patentably define over Koretsune et al. The amendments made to the claims and to the description have been made clarity.

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Nevertheless, the amendment of claim 1 to include the language of claim 3, which has been indicated as containing allowable subject matter, should render the rejections of claims 1, 2 and 9 – 12 moot.

It is respectfully submitted that claims 1, 2 and 9 – 12 should be allowable.

Allowable Subject Matter

Claims 3 – 8 and 13 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all limitations of the base and any intervening claims.

The subject matter of claim 3 has been incorporated into claim 1. Since claim 3 has been incorporated into claim 1, claim 1 should now be allowable. Since claims 4 – 8 are depended through claim 3 and since claim 1 now contains the limitation of claim 3, claims 4 – 8 should also no longer be objectionable. Also, claim 13 should no longer be objectionable because claim 1, from which claim 13 depends, now contains the limitations of original claim 3.

Thus, it is respectfully submitted that claims 3 – 8 and 13 should now be allowable.

New claim 24 is essentially original claim 3 rewritten in independent form.

Claims 15 - 24

New claims 15 – 24, discussed above in the “Amendments to the Claims” section of this Amendment, also patentably define over Koretsune et al and other known art.

It is respectfully submitted that claims 15 – 24 should also be allowable.

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Summary

In view of the amendments made and the arguments presented, claims 1 – 24 should be allowable, this application should be in condition for allowance and a notice to that is earnestly solicited.

Respectfully Submitted,

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